DOCUMENT RESUME

ED 417 398 CS 013 135

AUTHOR	Tomesen, Marieke; Aarnoutse, Cor
TITLE	Effects of a Training Program in Deriving Word Meanings.
PUB DATE	1997-12-00
NOTE	5p.; Paper presented at the Annual Meeting of the National Reading Conference (47th, Scottsdale, AZ, December 3-6, 1997).
PUB TYPE	Reports - Research (143) -- Speeches/Meeting Papers (150)
EDRS PRICE	MF01/PC01 Plus Postage.
DESCRIPTORS	Comparative Analysis; Context Clues; Foreign Countries; Grade 4; *Instructional Effectiveness; Intermediate Grades; *Reading Comprehension; *Reading Improvement; Reading Research; *Reading Strategies; Remedial Reading
IDENTIFIERS	Netherlands

ABSTRACT

A study examined the effectiveness of a training program in deriving word meanings through morphological analysis and from context. Subjects were 31 fourth-grade average and poor readers from 8 Dutch elementary schools. Four groups of students were assigned to the experimental group and four groups were assigned to the control group. The experimental group received 12 lessons of 45 minutes each, twice a week. The training groups consisted of average and poor reading comprehenders, so that the average readers could be a model for the poor readers. Pre- and post-tests measured students' skills of word meaning derivation and general reading comprehension skills. Results indicated that students who received the training strategies to derive word meanings were able to use the strategies in reading texts, but a transfer effect to more general reading comprehension was not found to occur. Findings suggest that a training program that focuses on word meaning derivation strategies is a helpful tool for the remediation of poor readers' problems with reading a text. (Contains 12 references and a table of data.) (RS)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED 417 398

Effects of a Training Program in Deriving Word Meanings

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
This document has been reproduced as received from the person or organization originating it.
Minor changes have been made to improve reproduction quality.
Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

Marieke Tomesen & Cor Aarnoutse
National Center for Language Education
University of Nijmegen
P.O. Box 9104
6500 HE Nijmegen
The Netherlands
email: M.Tomesen@ped.kun.nl
C.Aarnoutse@ped.kun.nl

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY
M. Tomesen
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

Paper presented at the National Reading Conference
Scottsdale, Arizona, December, 1997

In this study the effects of a training program in deriving word meanings through morphological analysis and from context were examined in fourth grade average and poor reading comprehenders. The main goal of our research was to investigate whether our training program affected the ability to derive the meanings of unfamiliar words through morphological analysis and from the context, and general reading comprehension. Additionally, we were interested in the possible differences in training effects between average and poor readers.

Many students have reading comprehension problems as a result of the fact that they do not know the meaning of many words in the texts they read. There are two types of intervention in vocabulary instruction that can decrease these problems: (i) Explicit instruction on the meanings of specific words, and (ii) instruction which focuses on the development of word learning strategies. Deriving word meanings from the context of a word or through morphological analysis is an example of the latter type of instruction. There is evidence that explicit instruction on word meanings leads to an increase of a student's vocabulary, whereas training in deriving word meanings indeed improves a student's ability to derive word meanings (Jenkins, Matlock, & Slocum, 1989). In the latter case, students are usually able to derive enough information of a particular word to understand it's meaning in a particular context. However, this often does not lead to the storage of an individual word meaning in the mental lexicon. Since explicit teaching of word meanings demands much effort and time, instruction which focuses on the development of word learning strategies may be more efficient. The two types of intervention can complement each other well. The present study investigated the effectiveness of a training program (Tomesen, Claase, & Aarnoutse, 1997) which emphasized the development of word learning strategies in average and poor fourth grade readers.

In the training program, students are taught in detecting cues in a text that can be used to find the meaning of an unfamiliar word. They are taught, step by step, to detect the following cues: An illustration, analysis of the word form (subdividing a word into parts, each with one's own meaning), a synonym, an antonym, and a description of the unfamiliar word in surrounding sentences. The training program is based on the principles of direct instruction (Pearson, & Fielding, 1991; Roehler, & Duffy, 1991) and reciprocal teaching (Palincsar, & Brown, 1984; Brown, & Palincsar, 1989). The program is conducted in small groups. In the first lessons, it is predominantly the teacher who demonstrates the strategy by thinking aloud. The teacher reads a paragraph aloud, stops at an unfamiliar word and shows how he or she goes about discovering the meaning of the word. The students are then allowed to comment on his or her description of the word's meaning. The students gradually take over the role of discussion leader.

The training program mainly contains exploratory texts. These texts were specially constructed, since many authentic texts in books for children are not suitable for training of word learning strategies (Beck, McKeown, & McCaslin, 1983; Schatz, & Baldwin, 1986). Each text consists of two to four paragraphs. Almost every paragraph contains one unfamiliar word (a low frequent word which was expected to be unknown by the students). The meaning of these words can be derived from the context with the help of the strategies that are taught in the respective lesson.

CS013135

BEST COPY AVAILABLE

The participants in our study were 31 fourth-grade students from eight Dutch elementary schools. From each school, two average reading comprehenders and two poor reading comprehenders were selected. The students were selected on decoding ability, vocabulary, and reading comprehension, measured by means of standardized tests. The poor reading comprehenders had an average score on the decoding test, an average score on the vocabulary test, and a low score on the reading comprehension test. The average reading comprehenders had an average score on the decoding test, as well as on the vocabulary test and the reading comprehension test. Four groups of students were assigned to the experimental group, and four other groups were assigned to the control group. The experimental group and the control group were matched on the standardized reading tests mentioned above. We used a pretest-training-posttest control group design to test the effects of the training program. In the pretest phase, the students' skills of word meaning derivation and general reading comprehension skills were measured. The word meaning derivation skills were measured by means of the Analysis of Reading Comprehension (Claase, Cohen de Lara, Pauw, & Van der Wulp, 1997). The reading comprehension skills were measured by means of the Cloze Test (Aarnoutse, & Buitenhuis, 1984) and the Reading Comprehension Scale (CITO, 1990).

In the experimental phase, the experimental group received 12 lessons of 45 minutes each, twice a week. These lessons were given by the first author. The training groups consisted of average and poor reading comprehenders, so that the average readers could be a model for the poor readers.

The posttests were administered directly after the intervention program. The posttests were the same tests as the pretests, extended with the 'Derivation of Word Meanings Test' (Tomesen, Aarnoutse, & Claase, in press), which directly measured the program effect.

In Table I, the results are presented for the experimental group and the control group on the measurement instruments.

Table I Average pretest and posttest scores (standard deviations in parentheses) for the experimental group and the control group

	Experimental group (N=16)		Control group (N=15)	
	Pretest	Posttest	Pretest	Posttest
Derivation of Word Meanings Test (max = 22)	–	13.56 (3.54)	–	8.20 (3.26)
Analysis of Reading Comprehension (max = 300)	217.75 (53.03)	271.50 (21.12)	225.67 (58.92)	238.93 (43.13)
Cloze Test (max = 50)	21.63 (7.26)	26.69 (6.35)	24.80 (5.06)	26.40 (6.02)
Reading Comprehension Scale (max = 145)	113.13 (6.99)	122.88 (8.97)	113.07 (6.39)	120.07 (9.91)

In order to evaluate the effects of the training program on the ability of children to derive the meanings of words, the scores for the Derivation of Word Meanings Test and the results of the Analysis of

Reading Comprehension were analysed. The Derivation of Word Meanings Test was only administered as posttest. In order to evaluate the effects of the training program on the children's performance on this test in particular, a 2 (Group) by 2 (Reading Level) analysis of variance was conducted. Students participating in the training program scored significantly higher on the Derivation of Word Meanings Test than students in the control group. The different levels of reading ability did not produce differential training effects. The poor and the average readers both appeared to benefit from the training.

The other test, the Analysis of Reading Comprehension, was administered as pretest and as posttest. The forms used in pretest and in posttest could not be assumed to be parallel. Therefore, we conducted a 2 (Group) by 2 (Reading Level) analysis of covariance to examine the effects on this test in particular. The results on the Analysis of Reading Comprehension test revealed higher scores for the experimental group than for the control group on the posttest. The poor readers appeared to benefit more than the average readers.

In order to determine the transfer effects of the program (i.e., the effects of the program on general reading comprehension), the scores on the Cloze Test and on The Reading Comprehension Scale were analysed. Both test were administered as pretests and as posttests. A 2 (Group) by 2 (Reading Level) by 2 (Time of Testing) analysis of variance with repeated measures was performed on the results of these tests.

Analysis of the results for the Cloze Test showed that the experimental group did not progress more than the control group between pretesting and posttesting. Nevertheless, there was a trend in the expected direction. The training program appeared to have a differential effect on the performances of the Cloze Test of the poor versus average readers. The students with poor reading comprehension skills appeared to benefit more from the training than the students with average reading comprehension skills.

The Reading Comprehension Scale did not show significant differences between the experimental group and the control group. The poor and average readers in both the experimental and the control group also showed the same progress from pretest to posttest.

To conclude, the present study demonstrated clear effects of a training program on the ability of deriving word meanings. The students who received the training acquired strategies to derive word meanings, and were able to use these strategies in reading texts. A possible explanation for these positive results may be the fact that the students participating in the training program learned to apply the strategies for deriving word meanings through hearing the teacher and other students think aloud. With four students per instruction group, moreover, the instruction groups were relatively small which meant considerable attention for each of the students and active involvement of the students in the lessons. The students in the control groups, however, did not receive instruction in small groups.

A transfer effect to more general reading comprehension was not found to occur. Such an effect probably requires a much intenser and broader educational approach than the currently employed program (which contained only 12 lessons, and taught word learning strategies only). The present study, however, indicates that a training program that focuses on word meaning derivation strategies is a helpful tool for the remediation of poor readers' problems with reading a text.

References

Aarnoutse, C.A.J., & Buitenhuis, A.F. (1984). *Invultest en zoektest: Tests voor begrijpend lezen bestemd voor het vierde leerjaar van het basisonderwijs.* [Cloze Test for grade four]. Nijmegen: Berkhout.

Beck, I., McKeown, M., & McCaslin, E. (1983). All contexts are not created equal. *Elementary School Journal, 83*, 177-181.

Brown, A.L., & Palincsar, A.S. (1989). Guided, cooperative learning and individual knowledge acquisition. In L.B. Resnick (Ed.), *Knowing, learning and instruction. Essays in honor of Robert Glaser* (pp. 393-451). Hillsdale, N.J.: Lawrence Erlbaum Associates.

CITO (1990). *Schaal Begrijpend Lezen.* [Reading Comprehension Scale]. Arnhem: CITO.

Claase, R., Cohen de Lara, H., Pauw, L., & Van der Wulp, M. (1997). *Pedagogisch - Didactisch Onderzoek Begrijpend Lezen.* [Analysis of Reading Comprehension]. Nijmegen: Berkhout.

Jenkins, J.R., Matlock, B., & Slocum, T.A. (1989). Two approaches to vocabulary instruction: The

teaching of individual word meanings and practice in deriving word meaning from context. *Reading Research Quarterly, 24*, 215-235.

Palincsar, A.S., & Brown, A.L. (1984). Reciprocal teaching of comprehension-fostering and comprehension-monitoring activities. *Cognition and Instruction, I (2)*, 117-175.

Pearson, P.D., & Fielding, L. (1991). Comprehension instruction. The development of strategic readers. In R. Barr, M.L. Kamil, P.B. Mosenthal & P.D. Pearson (Eds.), *Handbook of Reading Research* (vol. 2, pp. 815-860). New York: Longman.

Roehler, L.R., & Duffy, G.G. (1991). Teachers' instructional actions. In Barr, M.L. Kamil, P.B. Mosenthal & P.D. Pearson (Eds.), *Handbook of Reading Research* (vol. 2, pp. 861-884). New York: Longman.

Schatz, E.K., & Baldwin, R.S. (1986). Context clues are unreliable predictors of word meanings. *Reading Research Quarterly, 21*, 439-453.

Tomesen, M.A., Aarnoutse, C.A.J., & Claase, R. (in press). *Toets 'Afleiden van woordbetekenissen'*. [Derivation of Word Meanings Test]. Nijmegen: Berkhout.

Tomesen, M.A., Claase, R., & Aarnoutse, C.A.J. (1997). *Woorddetective: Programma voor het leren afleiden van woordbetekenissen*. [Word Detective: A training program in deriving word meanings]. Nijmegen: Berkhout.